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27.04.94 Bulletin 94/17(71) Applicant: **Dow Corning Toray Silicone Co., Ltd.**
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D-51465 Bergisch Gladbach (DE)(54) **Ionically conductive organosiloxane polymer compositions.**

(57) The ionically conductive compositions of this invention comprise the ionic pair $(-\text{SO}_3)_n\text{M}^{n+}$ bonded either to a crosslinked polymer containing organosiloxane units or to a finely divided solid that is immobilized within said composition, where the sulfur atom of said ionic pair is bonded by means of a divalent hydrocarbon radical that optionally contains at least one ether (-O-) linkage, and where M is a metal from Group I or Group II of the periodic table of the elements and n represents the valence of M. If the polymer does not contain oxyalkylene units the composition contains a non-aqueous electrolyte.

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EUROPEAN SEARCH REPORT

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EP 93 11 2208

| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|---|---|--|--|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int.Cl.5) |
| A | US-A-4 888 257 (S.C.NARANG) * the whole document * --- | 1-9 | H01B1/12 H01M6/18 |
| A | EP-A-0 362 593 (TORAY SILICONE) * page 4, line 30 - line 33; claims 1,2 * --- | 1-9 | |
| A,P | POLYMERS FOR ADVANCED TECHNOLOGIES vol. 4, no. 2/3, 1993, CHICHESTER, SUSSEX, GB pages 80 - 84 J.NI & AL 'synthesis of a novel polysiloxane-based polymer electrolyte and its ionic conductivity' * the whole document * --- | 1-9 | |
| A | JOURNAL ELECTROCHEM.SOC. vol. 137, no. 1, January 1990, USA pages 29 - 34 Z. OGUMI & AL 'ionically conductive thin polymer films prepared by plasma polymerization' * the whole document * --- | 1-9 | |
| A | DATABASE WPI Section Ch, Derwent Publications Ltd., London, GB; Class A85, AN 90-302911 & JP-A-2 215 836 (FUJI PHOTO) 28 March 1990 * abstract * ----- | 1,3 | |
| The present search report has been drawn up for all claims | | | |
| Place of search THE HAGUE | | Date of completion of the search 28 February 1994 | Examiner Drouot, M-C |
| CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | | | |